Method for Manufacturing of an Optical Fiber with a Decoupling Interface for Scattered Light, Use of an Optical Fiber and Device for Monitoring of the Light Power guided through an Optical Fiber

Abstract

Method for manufacturing of an optical fiber with a decoupling interface (200) for scattered light to monitor the power of light guided through said optical fiber, wherein said optical fiber comprises a core (201) having a first refractive index (n_1) and a cladding (202) surrounding said core (201), said cladding (202) having a second refractive index (n_2) being smaller than said first refractive index (n_1), and wherein a portion of said optical fiber is substantially straightly aligned in the region of the decoupling interface (200), in which method the optical fiber is electro-thermally treated at an intermediate position within said substantially straightly aligned portion such that a partial mixture of core material and cladding material and, thereby, formation of scattering centers occurs in an interface region (203) between said core (201) and said cladding (202), thereby forming said decoupling interface (200) for scattered light from said so modified intermediate position.

(significant Fig.2a)